ENGINEERING NEWS-RECORD

A WEEKLY JOURNAL OF CIVIL ENGINEERING AND CONSTRUCTION

Volume 137

★

JULY-DECEMBER, 1946

McGRAW-HILL PUBLISHING COMPANY, INC.
330 WEST 42D STREET, NEW YORK 18, N. Y.

INDEX

ENGINEERING NEWS-RECORD

Copyright 1947 by The
McGRAW-HILL PUBLISHING CO., INC.
330 WEST 42d ST., NEW YORK 18, N. Y.

VOLUME 137 JULY-DECEMBER, 1946

July 4 1–16
July 11 17–68
July 18 69–84
July 25 85–130
August 1 131–146
August 8 147–196
August 15 197–214
August 22 215–264
August 29 265–280
September 5 281–332
September 12 333–348
September 19 349–398
September 26 399–414
October 3 415–468
October 10 469–486
October 17 487–542
October 24 543–560
October 31 561–608
November 7 609–626
November 14 627–680
November 21 681–698
November 28 699–750
December 5 751–768
December 12 769–822
December 19 823–844
December 26 845–892

A

Aerial tramways see Cableways

Aeronautics

Airplanes
Launch planes by electricity n*404
Airports
AGG, air group create cooperative committee n773
Appropriations for state airports n199
Argentina to build six airports n72
Atlantic Ocean outposts built by U. S. n*138
Azores—building an airbase. Brig. Gen. J. S. Bragdon *250
CAA airport money policy to be discussed n349
CAA gets appropriation for starting program n76
CAA sets up offices for airport program n488
Camp Spring, Md. administration building for Army Air Forces n*469
China—airbase near Tsingsao completed n*613
Cleveland asks bids on dike work n335
Cumberland, Md. mountain made into airport n*422
East Boston, Mass. ground broken .. n272
Fairfield-Suisan, Calif. concrete runway with no expansion joints *504
Gravelly Point, Va. contractors lose by Supreme Court decision n772
Great Britain to build biggest hangar for biggest plane n*403
Hangars
Eglin Field, Fla. hangar built for Army test work *28
Radiant heating for a hangar. J. L. Ottenheimer *254
Richmond, Fla. hangar wreck caused by winds n*22
New York City airlines bus depot planned n11
Idlewild grading (unit prices) 747
La Guardia Field to be closed as filled surface sinks n568
New York region to have sixty new airfields n557
Newark, N. J. airport planned n*149
Oakland, Calif. airport to expand .. n*633
Phoenix plans a new airport. John Girand *646
Pavements see also Pavements
Regional airport development e290
Runways—tests of flexible pavement for airport runways, pt. 1, *36; pt. 2 ..... *113
St. Louis gets low bid for work n629
San Francisco bond issue too small for airport n752
Tern Island airfield n*760
Toledo airport improvements (unit prices) 394
U. S. airbases in Atlantic area. M. H. Lander ..... l 257
Wyoming plans ten-year program for airports *365
Helicopters can make rooftop landings n*696
Propeller test house built in East Hartford, Conn. n*558
Africa—South Africa to have first native town n473
Agg. Dean Thomas R. now devotes himself to research n*704
Air conditioning
Diesel Equipment Div. of G.M.C. building is air conditioned and designed for maximum efficiency *801
Air raids and protection
Heligoland fortress island is tested by the British with bombs *438
Manila, Philippine Is. reconstruction. Herbert Leopold *172

Aluminum

Aluminum houses and aluminum latrines n*135
Massena railroad bridge installs aluminum span n*415; *714
Prefabricated aluminum houses .. n419, n*837
Puerto Rico to have aluminum houses . n*135
Use of aluminum wire as conductors for cables suggested as substitute for copper 522
American Congress on Surveying and Mapping Washington, D. C. meeting n19
American Public Health Assn. Meeting in Cleveland, n697; plans n761
American Public Works Assn. New York-New Jersey Sections conduct unique outdoor meetings n*758
American Road Builders' Association Nominees for officers n545
American Shore & Beach Protection Assn. Meeting n340
American Society for Engineering Education—New name for Society for Promotion of Engineering Education n*8
American Society for Testing Materials Buffalo meeting n7; n17
American Society of Civil Engineers
Sets up new regional office n*548
Spokane convention n85
Technical divisions meet n566
Wagner Act clarification on rights of professional employees sought by A.S.C.E. n89
American Standards Assn. New York City meeting n699
American Water Works Assn. Southeastern Section meeting n355
Amphibian Engineer Association. meeting n773

Aqueducts

Deer Creek-Salt Lake aqueducts—Utah voters approve n824
Flume crosses Crooked River canyon on a rigid frame *448
Oakland, Calif.
Bids requested n85
East Bay Municipal District installs check-valves to prevent water hammer. H. A. Knudson *310
San Diego aqueduct financing studied . n185
Argentina—Six airports to be built n72
Asphalt Institute meets ns40
Associated Equipment Distributors Head scores surplus disposal as hampered by red tape n*417
Associated General Contractors Meeting . n565

Atomic Power

Atom bomb test well run, will produce scientific data n7
Bikini atom bomb test n7
Camp Upton, N. Y. selected as atomic research center n7
Canada's atom project under new board n7
G.E. to build atom power lab at Schenectady n7
New use for atomic bombs. A. H. Geddes l
Nuclear power plants n7
Structural design for nuclear power n7

Australia

Barges converted into houseboats n*47
Brisbane plans water and sewerage expansion program n*33
Canberra to transport houses from Tecumwal ..... n*
Port of Portland to be improved ..... n*
Portland harbor for all-weather" considered ..... n*
Warragamba Gorge Dam started ..... n*
Water supply program proposed ..... n*
Austria—Kaprun Dam construction rushed n*33
Automobiles—Large increase found in cars needing repairs ..... n*

Awards

John Fritz medal awarded to L. W. Chubb ..... n*
James F. Lincoln "Design-for-Progress" award ..... n*
Moles award to Crimmins, Morrison ..... n*
Azores building an airbase. Brig. Gen. J. S. Bragdon ..... *

B

Beams

Allowable stress in beams. T. P. Young (table) ..... *
Chart determines economic depth of plate girders. B. L. Parker ..... *
Laterally unsupported beams. T. R. Higgins l
Bins for beans ..... n*
Blasting—New powder under study in the West ..... n*
Blasting—San Bruno, Calif. citizens sue to halt blasting ..... n*
Bolivia—Highway plans. Fred Lavis l
Santa Cruz-Cochabamba highway being constructed. J. L. Harrison ..... *

Book Reviews

Airports; design, construction and management. Glidden, Law & Cowles ..... r
Airport planning. Froesch & Prokosch ..... r
Art of plain talk. Rudolf Flesch ..... r
Builders for battle. D. O. Woodbury ..... r
Building an engineering career. C. C. Williams ..... r
Business law of aviation. G. O. Dykstra & Lillian Dykstra ..... r
Considerations sur le probleme de la stabilite. Daniel Gaden ..... r
The contractor's legal problems. N. L. Hayward ..... r
Data book for civil engineers, vol. 2. E. E. Seelye ..... r
Design of reinforced concrete structures. Dean Peabody Jr. ..... r
Development of mathematics. E. T. Bell ..... r
Economics in one lesson. Henry Hazlitt ..... r
Engineer at law. C. B. & J. R. McCullough ..... r

* Illustrated; a, abstracts; e, editorials; l, letter; n, news

English-French and French-English technical dictionary. Francis Cusset.. 812
Geological investigation of the alluvial valley of the lower Mississippi River. H. N. Fisk..... 457
Interstate compacts. Colorado Water Conservation Board 190
Legal phases of construction contracts. I. V. Werbin..... 189
Manual of design for arc welded steel structures. Lamotte Grover..... 669
Material handing equipment. W. M. Potts 670
Municipal year book; 1946 ed. by Ridley & Nolting..... 189
The origin, distribution and airphoto identification of United States soils. D. S. Jenkins & others..... 669
Practical design handbook for engineers. Alois Cibulka 670
Proposed manual of standard practice for detailing reinforced concrete structures 189
Public works wage rate and some of its economic effects. Viola Wycoff..... 811
Modular coordination guide. Adams & Bradley 811
Soils, concrete and bituminous materials 324
Surface construction without accidents. H. E. Beaven..... 189
Theory of structures. Timoshenko & Young 324
Under the Red Sea Sun. Commander Edward Ellsberg 811
Water treatment and purification. W. J. Ryan 190
Women can be engineers. Alice C. Goff 669

Brazil

Cranes purchased for harbor improvements n755
Pelotas docks to be improved..... n403
Railway bridge trusses strengthened by new arches. Oscar Machada da Costa. *738
Railway improvement program..... n473
Rio de Janeiro to be replaced by a new city n827
Subway system to be considered..... n337
Volta Redonda steel plant erection problems. J. B. Gibson..... *120

Bridge accidents and failures

Barnegat Bay, N. J. railway bridge damaged by fire..... n761
Braille, N. J. bridge collapse blamed on marine borers n266

Bridge Construction

Bailey bridge trusses provide temporary crossing. G. H. Allen..... *368
Cattaraugus Creek, N. Y. Erie Thruway welded bridge carries deck area of two acres. E. W. Wendell..... *856
Fixed costs chargeable to bridge construction. W. N. Schroeder..... 321
Massena, N. Y. railroad bridge installs aluminum span *714
Richmond, Calif. causeway built of precast units *710
Topock, Ariz. railroad bridge redecked for vehicles. J. W. Green..... *137

Bridge Design

Burma-Irrawaddy River floating bridge constructed during the war..... *226
Garrison Dam, N. D. construction bridge designed for maximum salvage..... *109
Great Britain—Transporter Bridge to be replaced n613
Massena, N. Y.—Aluminum span for railroad bridge *714
Memphis, Tenn.—New approach planned n697
Old Lyme-Saybrook, Conn. toll bridge to be built n619
Richmond, Calif.—Causeway built of precast units *710
St. Louis, Mo.—Eads Bridge being repaired n618, n*683
San Francisco Bay crossing recommends several plans n615
San Francisco-Oakland Bay Bridge—Alameda wants approach built to bridge n694
Suspension—San Francisco-Golden Gate Bridge vibration studies..... *184
Tampa Bay, bridge—Work to start in 1947 ..... n*619
Washington, D. C.—Anacostia River bridge bids too high..... n694
Wilmington, Del.—Military board hearing n694

Bridge Renewals and Repairs

Belgium—rebuilding bridges an old story to the engineers..... *434
Berlin, N. H. old Phoenix—section bridge repaired to carry modern loads safely. Johnson & Seelye..... *796
Brazilian railway bridge truses strengthened by new arches. Oscar Machado da Costa *738
France rebuilds its rail bridges..... *178
France—wrecked bridge saved by U. S. Army engineers *322
New York City—Geo. Washington Bridge being repainted n*133
Russia to restore railway bridges..... n134
Timber lack halts repair of Louisiana bridges n279
Topock, Ariz. railroad bridge redecked. J. W. Green..... *137
Washington highway bridge repaired with extra beams..... *874

Bridges

Bailey military bridges built in France and in Germany. R. C. Horne..... 1*391
Bartlesville, Okla.—Three bridges over Caney River (unit prices)..... 892
Belgium—Rebuilding bridges an old story to the engineer..... *434
Berlin, N. H.—Repairing an old Phoenix-Section bridge. Johnson & Seelye..... *796
Berlin, N. H.—Repairing an old story to the engineer *434
Brazil—Railway bridge trusses strengthened by new arches. Oscar Machado da Costa *738
Burma—Irrawaddy River floating bridge constructed during the war..... *226
Canada—Canso, N. S. bridge test borings made n71
Cattaraugus Creek, N. Y.—Erie Thruway welded bridge carries deck area of two acres. E. W. Wendell..... *856
Cleveland—Clay's Ferry bridge opened..n288
Delaware River bridge plan submitted..n422
Flume crosses Crooked River canyon on a rigid frame..... *448
France
Blasted railroad bridges rebuilt..... *178
Caronte railway viaduct repaired..... n337
Garrison Dam, N. D.—Construction bridge designed for maximum salvage *109
Great Britain—Severn River bridge planned n5
Highway bridge construction jobs considered n767
Highway bridges receive no bids or too high bids n10
Jasper, Ind.—Modified Bailey bridge trusses provide temporary crossing. G. H. Allen..... *368
Kentucky-Indiana bridge now toll-free.. n767
Longview, Wash.—Wooden approaches being replaced n*354
Massena, N. Y.
Aluminum bridge e424
Aluminum bridge spans..... n*415
Terminal RR bridge piers..... n*543
Mississippi River bridge proposed..... n406
New York City—Geo. Washington Bridge being repainted n*133
North Carolina plans bridge survey..... n152
Oregon—Schooner Creek bridge (unit prices) 397
Pennsylvania toll bridges not to be free..n141
St. Louis, Mo.
Chain-of-Rocks bridge acquired by Madison, Ill. n852
New highway bridge to be built..... n218
San Diego, Calif.
Bridge becomes a draw..... n*765
Pedestrian, equestrian bridge..... n*71
San Francisco-Alameda Bridge—Hearing on plan to be held..... n8
San Francisco—Golden Gate Bridge—Marin County approach plans studied n141
Vibration studies *184
San Francisco-Oakland Bay Bridge—New crossing under study n*222, n*274, n407
South Carolina highway bridge construction n*776
Stony Creek, Md. (Unit prices)..... 891
Suspension bridges—Cables of 90-year-old bridge, Calif. still in sound condition *508
Sweden—Skanstullsbron Bridge completed n*336
Tacoma Narrows Bridge—Bids to be invited for reconstruction..... n74
Tampa Bay, Fla.—Crossing bridge to be started in 1947..... n562
Tolls—West Virginia removes tolls on three bridges n343
Topock, Ariz.—Railroad bridge redecked for vehicles. J. W. Green..... *53
Washington state highway bridge repaired with extra beams..... *874
Washington, D. C.—14th Street Bridge to be replaced by two..... n75
British West Indies—Workers housing planned n72

Building Accidents and Failures

Atlanta hotel fire will cause revision of building code n842, n851
Continuing inspection needed e26
Frankfort, Ky. state building buckles slightly n280
Monrovia, Calif. city hall is a menace say engineers n753

Building Construction

Brazilian steel plant erection problems. J. B. Gibson..... *120
Chanelling of building materials to housing n281
Cost of home construction $7,000 average n491
Cracked walls avoided. T. H. McKaig..*523
Curtailment orders..... n282
False statements cause building shutdowns n341
Floor for Ford Motor plant is poured before steel erection is started..... n*828
Grain elevators built with slip forms. H. R. Straight..... *728
Guides to improved framed walls for houses. A. D. Freas..... *519
Hartford hospital building frame welded. Poole & Booth..... *577
Hospital allotments by states (table).. 412
Holston Ordnance Works construction speeded behind a curtain of war secrecy *96
Mississippi outlines school program.... n764
New ideas for building advanced to hasten end of housing crisis..... *534
New York City milk plant designed for rapid erection *234
N. Y. City St. Patrick's Cathedral repair. *720
Non-residence building curb to be eased in 1947 ..... n845
Non-residential building estimate by OWMR for 1946..... n69
Portland, Ore. building levy legality to be determined n73
Russian "innovations". L. J. Mensch..1 188
Sacramento River floodways not to be used for building..... n271
Sidewalk superintendents given seats. Philadelphia n490
Why "slab-band" floors are economical. F. N. Severud..... *526

Building Design

Adobe houses. M. P. Sheridan..... 1 537
Auto assembly plants design. Wilmington, Framingham and Atlanta..... *599
Diesel Equipment Div. of G.M.C. building air conditioned and designed for maximum efficiency *801
Explosion pressure vents. H. R. Brown (Building Designers' Library)..... *445
Fresno, Calif. plant designed for heavy loads with welded frame. Mark Falk..*640
Industrial research laboratories design. W. W. Fenner..... *510
Johns-Manville Research Center features movable partitions *169
Lustron Homes, all-steel, porcelain finish prefabs n*849
Modular coordination found impractical in Britain 240
One-story factory design. E. F. McKeon 1*258
Planning for elevator installations (Building Designers' Library)..... *875
Principles of noise reduction in offices and factories (Building Designers' Library). M. A. Smith..... *643
Sweden finds underground factories practicable for peacetime work..... n*754
Tiffin, Ohio, General Electric plant roof of welded trusses aids conveyorized layout *360
Veterans' Hospitals design criteria..... *662

Building Designers Library

Design of explosion pressure vents. H. R. Brown..... *445
Fluorescent lighting developments increase lamp output, decrease costs. A. G. Elley..... *105
Good roofs require more than mopping. E. A. Swenson..... *515
Planning for elevator installations.... *875
Previous articles in this series..... 108
Principles of noise reduction in offices and factories. M. A. Smith..... *643

Building Laws and Regulations

Atlanta hotel fire will cause revision of building code n842
Atlanta speeds fire-prevention study..n851
Building inspection by affidavit. C. P. Morgan 1 808
Building officials organize to promote national code n469
Cleveland code revision..... n209
District of Columbia revises building code n15
Fire safety for hotels..... e854
Foundation formed to promote model national building code..... n556
Great Britain preparing performance standards building code..... 525
New York State zoning amendment voided by court..... n145
Prefabricated construction code approved n155
Southern builders favor new standard code n699
Steel building code changes analyzed. T. R. Higgins..... *529
Washington cities use new way to enforce building codes..... 104
Building Officials Conference of America Convention n469
Building Products Institute Formed n627
Sees material production ample in 1947 ..... n681

Buildings

Atlanta, Ga.—Pontiac assembly plant..*599
Baltimore, Md.—1946 building, etc..... n697
Boston—John Hancock Insurance Co. structure started n*623
Brazil—Volta Redonda steel plant erection problems. J. B. Gibson..... *120
California, Delaware and Wisconsin to build new service facilities..... n623
Camp Springs, Md.—Army Air Forces Strategic Air Command building.... n*469
Camp Upton, N. Y.—Atom research center to be built..... n209
Canada
Montreal hospital to be started.... n683
University of Toronto constructing new buildings n768
Central Islip, Long Island—Extension and improvements planned..... n209

* Illustrated; a, abstracts; e, editorials; l, letter; n, news

C & O RR installs radiant heat in West Virginia station n*144
Chicago
Lakeside Press building to be supported by 3,850 pipe piles..... *722
New University headquarters..... n*286
University of Illinois to lease pier as branch n11
Cicero, Ill.—Lustron Homes, all-steel, porcelain finish prefabs..... n*849
College Park, Md.—University of Maryland to construct new buildings.... n347
Colombia—Baseball stadium for Carribbean Olympic games..... n*686
Dallas
Boilers to be installed on top of building n833
City market plan strikes snag..... n74
Des Moines, Ia.—Vacuum holds forms.. n*841
Durham, N. C.—Rat-proofed buildings required n267
East Hartford, Conn.—Propeller test house built n*558
Ecuador—Capitol planned n*337
Florida asks CPA OK on $8,000,000 for buildings n401
Ford Research & Engineering Center. W. W. Fenner..... *510
Fort Wayne, Ind.—Veterans hospital planned n490
Framingham, Mass.—Buick assembly plant *599
Frankfort, Ky. state building buckles slightly n280
Fresno, Calif.—Plant designed for heavy loads with welded frame. Mark Falk. *640
Grand Rapids, Mich.—Diesel Equipment Div. of G.M.C. building is air conditioned and designed for maximum efficiency *801
Hammond, Ind.—Standard Oil Co.—wellpoints used to compact sand fill. H. E. Berger..... *44
Hartford, Conn.—Hospital building has welded frame. Poole & Booth..... *577
Hopeville, Ga.—Ford Motor plant floor completed before steel erection started n*828
Hospital allotments by states (table).. 412
Hospitals for civilian employees approved by House group..... n90
Hungry Horse Camp, Mont.—Warehouse building (unit prices)..... 394
Indianapolis, Ind.—New state buildings are needed n852
Kansas City, Mo.—Midwest Research Institute plans building..... n833
Kingsport, Tenn.—Holston Ordnance Works construction *96
Los Angeles—May Co. store concrete is pumped n*475
Manville, N. J.—Johns-Manville Research Center features movable partitions *169
Mexico City
American School under construction.. n473
Hotel planned n*203
Miles City, Mont.—Contract signed for veterans Hospital n153
Minneapolis, Minn.
Plans expansion for schools..... n136
Univ. of Minnesota asks funds for buildings n695
Monrovia, Calif.—City hall is a safety hazard n753
New York City
Best & Co.'s new store being constructed n*79
Elliott Houses use slab-band floor construction. F. N. Severud..... *526
Madison Square Garden structure at Columbus Circle considered..... n*690
Milk plant designed for rapid erection *234
New York Life Ins. development at Fresh Meadows, Queens, accelerated n73
Rockefeller Center Esso building steel columns n*411
St. Patrick's Cathedral roof repaired while supported by outside cantilever beams *720
Stainless steel bonded to plywood..... n*544
United Nations select N.Y.C. for skyscraper world capital center (map) .n825
Newark, N. J.—Weston Electrical Instrument Corp. laboratory..... n*484
New Mexico—Army builds blockhouse for rocket testing..... n*476
Port Wentworth, Ga.—Paper-board mill starter n687
St. Louis, Mo.
Ford Motor plant contracts for firm to install equipment..... n335
Veterans Hospital planned n343
Schenectady, N. Y.—G.E. to build atom power lab n687
Switzerland—Zurich stadium roof supported by four columns..... *454
Syracuse—War plant converted into college building n552
Tallahassee, Fla.—University of Florida to build new gym..... n347
Tiffin, Ohio—General Electric plant roof of welded trusses aids conveyorized layout *360
Tuscaloosa—University of Alabama plans buildings n347
Veterans Hospitals
Contracts let..... n154, n343, n753
design criteria for Veterans' hospitals *662
Washington, D. C.—Hospital floors built with cinder block..... *603
Wilkes-Barre, Pa.—Veterans Hospital planned *687
Wilmington, Del.—General Motors assembly plant *599
Wingdale, N. Y. State—Hospital to be constructed n354
Buildings—See also Housing
Buses—New York City plans new airlines bus depot n11

C

Cableways—California aerial tramway survey n3
Caissons
Helium gas in compressed air operations *118
Prefabricated foundations for oil wells in Lake Maracaibo, Venezuela. E. J. Cleary *859 e854
Canada—Campell River development pushed n133
Labor Board clarifies status of employed Canadian engineers n217
Canadian Council of Professional Engineers and Scientists. W. J. Gilson..... l 124

Canals

Charts for canal flow computations. Commons & Griffith..... *664
Coachella Canal—Improved trimming and paving equipment. C. S. Hale.. *595
Columbia Basin Project canal contract awarded n133
Delta-Mendota Canal, Calif.—Contracts awarded n689
East Low Canal, Calif.—Contracts awarded n689
Florida Barge Canal—Calyx drill aids soft-ground examination. H. A. Scott. *102
Friant-Kern Canal—Exploratory work speeded by drill rig..... *390
Netherlands lock and railway restoration n*72
New York State Barge Canal—Oswego Lock culverts emptied and filled with siphon. D. A. Watt..... *872
Panama Canal
Expansion of canal should be speedy.. n205
Inspection by Board..... n*220
Sault Ste. Marie hydro plant plans completed n11
Yakima, Wash. Irrigation project Roza canal lining repaired..... n*24
Causeways—See Bridges

Cement

ASTM approves new specifications..... n17
Anti-trust order vacated by Court..... n410
"High early strength cement" in Germany reported n136
Less labor now required to produce cement n352
Mechanically applied cement mortar used to reline Los Angeles water main. G. W. Jones..... *506
Mortar placing with job-made machine. *186
New specifications set up by the government n136
Oregon grants cement priorities for vets' housing n140
Prices on a delivered basis..... e425
Central Arizona Project Assn. organized to bring Colorado River water into area.. n140
Channels—Schuylkill River desilting plan. n352

Chile

Making Pan American Highway all-weather road n72
New cement plant..... n203
Prefabricated houses to be erected..... n203
Santiago subway system considered..... n336

China

Engineering literature for special library n203
Motion picture theater to be constructed n547
Yangstze Dam, drilling to begin..... n547
Yellow River bridge reconstruction n547, n827
Yellow River dikes being closed after an eight-year struggle..... n*268
City managers—City manager charters approved for 70 cities..... n848
Colombia—Breweries to be erected..... n755
Compressed-air work extended with helium-oxygen air *118

Concrete

Air entraining admixtures included in Public Roads Administration specifications *656
Cinder block replaces tile on Washington, D. C. hospital project..... *603
Classifying ready-mix concrete plants. L. D. Long..... *790
Connectors for timber joints made from cement mortar. Max Miller..... *364
Dams
Deposit leached from concrete found in gallery of dam..... *503
Horizontal joint put in arch dam to prevent cracking. G. E. Goodall... *884
Flat slabs and slab bands. M. Hirschthal ..... l 888
Forms
Adjustable all-steel form for steps
Slip forms for million-bushel elevat... H. R. Straight..... *
Vacuum holds forms for Des Moin... building *841
Heavy-duty concrete runway, Fairfie... Su-sun, Calif. with no expans... joints ..... *
Heligoland fortress island is tested... the British with bombs..... *
Precast sectional walls and roof all... for uneven reservoir settlement, N... Orleans ..... *
Pump concrete for department st... Los Angeles ..... *
Reinforced concrete on rocker to... swung into position to form sidewal... *
Shooting concrete into walls cuts lum... use and labor costs..... *
Slab-band floors are economical. F... Severud ..... *
Turbine-generator foundation design ...
Winter concreting—Propeller test... house in East Hartford, Conn.....

Construction

AGC demands lifting of all contr... governing construction industry..... n
Accident prevention saves millions... U. S. government contracts..... n
Appropriation bill provides for much construction ..... n
Appropriation for civilian hospitals a... proved by House..... n
Army civil works cut most under econ... omy rulings n561
The birth of mechanized construction. C. S. Hill..... *
Building volume indicators show curtailment effects ..... n
Civilian Production Administration to tabulate approved projects..... n
Community facilities in deficiency bill. n
Congress approved major engineering bills before closing session..... n
Cost estimates. M. C. Tuttle (chart)... n
Cost index figures show leveling-off ..... n
Cost of federal construction..... n
Industrial construction increases pace. n
New York approves new fire-protection material ..... n
OWMR allows $1.2 billion for federal construction ..... n
OWMR curtails federal departments budgeted construction work..... n
OWMR raises 1946 building estimates to $17 billion ..... n
Price control lifted from construction by President ..... n
Report reviews anti-trust cases in construction industry ..... n
U. S. Army engineers defer important construction work ..... n
Construction accidents boom hits power line electrocuting 4 men..... n

Construction Equipment

Asphalt mixers—Trenton, N. J. law requiring local paving mix plants upheld ..... n
The birth of mechanized construction. C. S. Hill..... *
Brick cleaning machine put out by Skoda Works ..... n
Canal trimming and paving equipment used on the Coachella Canal. C. S. Hale ..... *
Crane rails replaced with the aid of platform ..... *
Crane sets coal unloading tower.... n*
Drag equipment removes sticky mud in tailrace below DeCew Falls powerhouse ..... *
Drill, calyx, aids soft-ground examination. H. A. Scott..... *
Drill rig speeds Friant-Kern Canal.... *
Drillers protected from punctured electric conduits by grounded air hose... *
Flagpole cleaned with metal device.... *
Highway paints studied by means of shop equipment ..... *
Hydraulic jack installs concrete pipe under railroad ..... *
Jeep lift ..... *
Lift-truck doubles as construction elevator ..... *
Loader, elevating and dump wagons move 178,000 cu. yd. of earth monthly for Shirley Highway..... *
Missouri Highway Dept. finds preventive maintenance extends life of equipment ..... *
Mixer, rotary, with spray-bar attachment ..... *
Nails, hardware, wiring put under priority rule n140;
Nails stolen by thieves..... n
Nails, 30-years old, used..... n
NHA extends building machine freeze n
New York-New Jersey Sections of APWA conduct unique outdoor meetings... n
OPA suspends control on some machinery ..... n
Pile-pulling equipment ..... *
Price rise of machinery..... n75;
Pump places mortar in rock masonry joints of Newton Dam..... *
Rack for oil drums..... *
Roller, grid, for paving..... *
Scraper—heavy rock excavation in Kentucky hauled with earthmoving scrapers ..... *
Spreader of crushed stone used on high-

* Illustrated; a, abstracts; e, editorials; l, letter; n, news

ways *604
Weed killer used in spray kit..... *604
Construction Industry Advisory Council Meeting n699

Construction Materials

AGC governors oppose further price controls n23
Adobe houses. M. P. Sheridan..... l 537
Black market in building supplies charged by government..... n1
Brick standards issued by ASTM..... n470
Builder group sees material production ample in 1947..... n681
Calif. contractors fight black mart.... n216
CPA clarifies rule on HH-priority ratings n770
CPA report indicates below demand production for year..... n147
Clay walls for British housing project. n*278
Creosote shipments promised by Britain n74
50 War Assets Administration construction materials under priority control to aid housing..... n218
E.N.R. survey shows supplies still short as price control lifted..... n701
Expansion of priority aid refused Army Engineers n90
Federal control order..... n281
Guides to improved framed walls for houses. A. D. Freas..... *519
Materials and labor prices..... 62, 192, 326, 460, 672, 814
Midwest material supply follows downward trend n153
Modular coordination found impracticable in Britain..... 240
New ideas for building advanced to hasten end of housing crisis..... *534
Plastics used in war time to be used in hospital construction..... 389
Premium payments for gypsum board and lath to spur housing..... n73
Price control lifted from materials wages n627
Price increases allowed..... n131; n153
Rice-cement block invented..... n343
Salvage of surplus military building materials n270
San Diego, Calif. army camp material makes homes for veterans..... n490
Shortage continued n270
Structural insulation recommendation revised n79
Substitute building materials to speed vets' housing sought by Mass..... n218
Supply situation continues dark..... n131
U. S. Commerce Dept. reports shortages n283; n701
Wartime building industry controls lifted n823

Contractors

California contractors penalized by WSB n422
False statements cause building shutdowns n341
Housing contractor fined for paying higher than average wages..... n2
Pasadena, Calif. builder punished for housing order violation..... n478

Contracts

Accident prevention saves millions on U. S. government contracts..... 800
Bids—Avoiding trouble on government bidding. Bonzagni & Reich..... 373
ENR engineering construction contracts 16, 25, 83, 93, 146, 155, 214, 223, 280, 289, 348, 357, 413, 423, 486, 493, 559, 625, 635, 698, 707, 768, 843, 853
Hidden costs in contracts..... e778

Culverts

Cutoff walls and riprap reduce culvert maintenance. W. J. Gooding Jr.... *58
On culvert design research. F. F. Izzard ..... l 392
Siphons culvert of Oswego lock, N. Y. State Barge Canal, gives long service. D. A. Watt..... *872
Small culvert design. F. T. Mavis..... *51

D

Dams

Australia—Warragamba Gorge Dam started n*827
Africa—Loskop and Vaalbank Dams reduce erosion in spillways by "splitters" *783
Allatoona Dam, Ga.—Dam and powerhouse (unit prices)..... 126
Anderson Ranch Dam—Earth-fill placed rapidly n556
Height is increasing..... n*201
Angostura Dam—Work to begin soon.. n133
Austria Kaprun Dam—Construction rushed n*338
Barker Dam—Resurfacing on upstream side n*839
Bluestone Dam—Construction resumed. n*616
Boulder Dam—Loose rock below dam to be cleared away..... n*74
Boysen Dam, Wyo.—Transmission and distribution lines (unit prices)..... 261
Bull Shoals Dam—Contract let..... n220
California dam projects under study.. n706
Cascade Dam, Idaho—Site of dam.... n*148
Center Hill Dam—Completion scheduled for 1948 ..... n616
Concrete pouring n*287
Chattahoochee Dam—High lock to be built n75
Cherry Creek Dam, Colo.—Bids received n6
Clark Fork Dam—Engineers studying effects of dams..... n624
Clark Hill Dam—Savannah River Electric seeks license..... n271
Colorado-Big Thompson — Contracts awarded n16
Coolidge Dam—Drought shuts down power plant n*221
Dale Hollow Dam—Generating units being placed n616
Davis Dam—Construction scheduled for 1949 completion..... *230
Diversion channel half completed.... n558
Old barracks moved 102 miles to house workmen *389
Delaware River dams impound water for New Jersey and Philadelphia..... n201
Dillon Dam, Ohio—Flood control project started n133
Enders Dam, Neb.—Contract awarded. n632
Fontana Dam—Reservoir causes ground settlement. C. E. Blee..... l 456
Fort Peck Dam—Water flows own spillway n*478
Foster Creek Dam, Wash.—Advance planning starts n632
France—Genissiat Dam in construction n403
St. Etienne-Cantales Dam and spillway built over power house..... *182
Garrison Dam, N. D.—Construction bridge designed for maximum salvage *109
Contractors and construction equipment manufacturers advise Army on dam n*631
Contracts awarded n6
Engineer district created..... n20
Work starts n*850
Grand Coulee Dam—Pumps to be installed in station..... n*213
Hales Bar Dam—Being raised..... n616
Indiana flood control dams proposed.. n407
Kortes Dam, Wyo.—Ground broken... n133
Lake Loveland Dam, Calif.—Horizontal joint put in arch dam to prevent cracking. G. E. Goodall..... *884
McNary Dam, Ore.—Work to start.... n133
Mill Creek Dam, Ohio—Cincinnati lends money to federal government for dam n632
Mt. Morris Dam model..... n*212
Newton Dam, Utah—Mortar placing with job-made machine..... *186
Northwest additional dams opposed by fishing interests n272
Northwest Dam—Heavy deposit leached from concrete found in gallery..... *503
Olentangy Dam work progresses..... n*273
Pine Flat Dam—Construction held up.. n205
Potholes Dam, Wash. — Contract awarded n689
Prado Dam, Calif.—Claims for road flooding n89
Quartz Creek Dam—Seven earth-fill dams planned instead..... n615
Rio Grande Dam, N. M.—Report on dam delayed n141
Russia—Orto-Tokio Reservoir work resumed n5
San Francisco Bay—Plans for transforming the bay studied by War and Navy Departments *56
Spillway energy dissipation..... e854
Susquehanna River, Pa. dam approved. n216
Sweet Home, Ore.—Earth dams recommended in place of this dam..... n632
U. S. Bureau of Reclamation, a great builder n483
Waco Dam—Missouri refuses consent to project n132
Wautauga Dam work resumed..... n616
Whitney Dam, Tex.—Final survey started n71
Yellowtail Dam, Mont.—Site of dam.. n*482
Dikes—Cleveland asks bids on airport dike work n335
Yellow River being turned back to its prewar channel. O. J. Todd..... *572
Dominican Republic — Public works pushed *382
Drainage—Illinois drainage area planned. n334
Dredges and dredging—Philadelphia reservoir dredged by sea dredge..... n*3
Philadelphia waterworks basin cleaned by dredge without interrupting service *314
Drydocks—Drydock sidelaunched into Ohio n*215
U. S. Maritime Commission to have five permanent fleet sites..... n406
Duplicating process, new, developed by the Army 313

E

Earth fill—Sanitary landfill used to fill cut in residential area..... 375
Earthquakes—June earthquake changed waters off Vancouver, B. C..... n141
Pacific Northwest earth shock..... n3
Earthwork computation—correction. C. F. Parker 392
Egypt—Ashwan Dam power installations bids requested n202
Formation of a TVA-like authority for the Nile n827
Electrical conductors—Use of aluminum wire as conductors for cables suggested as substitute for copper..... 322
Electrical transmission—Boom hits power line electrocuting 4 men..... n764
Boysen Unit, Wyo. transmission and distribution line (unit prices)..... 261
Susquehanna River spanned by mile-long power line..... n775
Electropult launches planes by electricity n*464
Elevators—Safety code being revised.... n763
Planning for elevator installations (Building Designers' Library)..... *875
Engineering News Record — Editorial award won for the third time..... n416
Engineering schools—ECPD postpones restudy of schools..... n549
Engineering school news..... 14, 82, 92, 212, 220, 273, 286, 346, 354, 411, 492, 552, 696, 766, 774, 841

Engineers

ASCE urges raise in engineers' pay.... n563
Consultants vs. civil service..... e557
Engineers for the railroads..... e709
Engineers in world affairs..... e559
Favors joining the NSPE. J. P. Goggin ..... l 808
Group at Princeton reviews educational and social trends..... n474
Interim world engineer group set up.. n420
Licensing—Examinations in New York State 798
Examiners see registration rise..... n633
No shortage of engineers. Christopher Krettecos ..... l 392
Not a profession. William Stack..... l 538
Overcrowding the professions..... e95
Pittsburgh civil engineer loses fight reinstatement n769
Responsibility of engineering educators e27
San Francisco receives authorization to hire consultants for sewage treatment plant at Islais Creek..... n87
Sanitary engineers in the Army..... e224
Status of employed Canadian engineers clarified by national labor board..... n217
Swedish civil engineer students tour U. S. n223
Training for management. Norman De Wind ..... l 537
U. S. Dept. of Labor and engineering societies making survey of economic status of engineers..... n333
Woman engineer elected by Iowa Engineering Society n145
Engineers—See also Nat'l. Prof. Assn. of Engineers, Architects & Scientists
Engineers' Council for Professional Development Restudy of engineering schools to be postponed..... n549
Engineers Joint Council—Survey of engineers progressing n416
Engineers Society of Milwaukee dedicates new home n492
Erosion—Lake Ontario shore erosion studied by U. S. and Canada..... 112
Loskop and Vaalbank Dams, Africa, reduce erosion in spillways by "splitters" *783
Ethiopia—Credit for restoring transportation n134
Excavation—Heavy rock excavation in Kentucky hauled with earthmoving scrapers *384
Explosion pressure vents. H. B. Brown (Building Designers' Library)..... *446
Exports—Thoughts on exports. C. J. Seibert ..... l 257

F

Federation of Sewage Works Assn. and Canadian Inst. on Sewage & Sanitation meet n489
Ferry terminal—New York City to replace fire-wrecked terminal n*20
Fishways—Canada-Fraser River fishways designed for wide head variation..... *386
Flagpole cleaned with metal device..... *186
Floating timber sewer into place, Paraguay *46

Floods and Flood Protection

Appropriations—Army Engineers to spend additional sum..... n706
California dam projects under study.. n706
Canada—Ontario watershed plan in report n624
Cuts in federal work. W. P. Dodge.. l 456
Flood control programs pushed by states n767
Flood-control projects to go ahead with new funds n751
Flood control work additions..... n775
Fresno, Calif. flood project upkeep fight n269
Illinois drainage area planned..... n334
Indiana flood control dams proposed. n407
Indiana's Wabash basin flood control discussed n624

* Illustrated; a, abstracts; e, editorials; l, letter; n, news

Lake Tahoe, Calif. partial drainage would stop Truckee floods..... n91
Los Angeles plans extensive flood control n848
Louisville floodwall work to proceed...n832
Miami Conservancy District pays off..e637
No building in Sacramento floodways..n271
Sacramento River floodways not to be used for buildings.....n271
St. Louis area flooded by record-breaking rain n218
Yellow River dikes being closed after an eight-year struggle.....n*268
Floors and Flooring—Washington, D. C. hospital floors built with cinder block.*603
Why "slab-band" floors are economical. F. N. Severud.....*526
Forests and forestry—Lumbermen see federal forest control.....n545
New forest areas reached by road program n*830

Foundations

Calyx drill aids soft-ground examination. H. A. Scott.....*102
Chicago foundations e779
Fontana Dam reservoir causes ground settlement. C. E. Blee.....l 456
Hollow piles as foundations for oil wells in Lake Maracaibo, Venezuela. E. J. Cleary *859; es54
Lakeside Press, Chicago to be supported by pipe piles.....*722
"Nalyeds" or surface ice formation, in permafrost regions. A. Tchekotillo..*724
Pennsylvania Electric's power plant excavations on the Allegheny kept dry with wellpoints *638
Piers and wharves on steel cylinders. E. H. Harlow.....*33
Photographing rock in drilling holes...*604
Soil bearing tests made with water tank on trailer *390
Turbine-generator foundation design...*316
Turbine-generator foundations. H. I. Sigman .....l 808
Wellpoints used to compact sand fill. L. E. Berger..... *44

France

American construction equipment ordered n5
Blasted railroad bridges rebuilt.....*178
Caronte railway viaduct repaired.....n337
Dunkirk port officially reopened.....n202
Genissiat Dam in construction.....n403
Public works reconstruction in process.n684
Railway electrification plan.....n202

G

Garages—Sacramento makes tests for underground garage n767
Two West Virginia cities will operate garages 782

Garbage and Refuse Disposal

Canada—Town in Ontario to cease using out-of-town refuse dumps.....n556
Hawaii incinerators to be constructed.n209
Landfills and health hazards..... e26
Landfill in Seattle reduces bulk by cardboard salvage *308
Landfill method of garbage disposal used at Fort Worth, Tex. cuts disposal costs 441
Landfill refuse disposal franchise renewed by San Francisco.....*296
Landfill—sanitary landfill used to fill cut in residential area..... 375
Los Angeles incinerator burns rubbish..*793
Los Angeles' quarter century of experience in feeding garbage to hogs.....*450
Spokane, Wash. proves efficiency of garbage incinerator in fifteen-year experience *666

Germany

Deterioration of highways.....n337
"High early strength cement" used for construction n136
Plastics to be used for prefabricated houses n*402
Water and waste treatment practices described in new reports..... 444
Girders—Temperature effects being studied on large welded girders. La Motte Grover *502
Tests on welded girders. La Motte Grover .....l 742

Grade Crossings

Farmingdale, L. I. crossing elimination n*82
Florence, S. C. railway underpass presents drainage problem.....n*766
Time lost at railroad grade crossings.. 64
Grain elevators—Iowa Soya Co. million bushel elevator constructed with slip forms. H. R. Straight.....*728

Great Britain

Birmingham erects private houses.... n72
Cost of a "new town".....n203
Hastings exhibition of housing.....n203
Housing constructed to date.....n402
"Importation" of power from Norway studied n827
International Organization for Standardization is formed.....n684
New factories approved.....n337
Norfolk water supply.....n755
Railway engineering using American-type T-rail n472
Second new town planned near London.n*134
Tunnel for railway under Tyne River suggested n134
Twelve types of permanent housing approved by the government.....n*546
Vehicular tunnel under the Thames River to be continued.....n337

H

Hawaii

Honolulu plans new building.....n278
Honolulu sewer plans.....n154
Incinerators to be constructed.....n209
Public works planned.....n485
Road building program.....n275
Water supply tunnel contract let.....n340

Heating and Ventilating

Radiant heated plant with different arrangements, Kankakee, Ill.....n618
Radiant heat used in Toronto to remove snow n624
Radiant heating for an aircraft hangar. J. L. Ottenheimer.....*254
Radiant heating installed in W. Va. rail station n*144
Heligoland fortress island is tested by the British with bombs.....*438
Helium gas in compressed air operation..*118

Highway Administration

Congress sets up new road committees.n219
Delaware bureau head appointed.....n*829
Kentucky highway deputy chief named.n287
Missouri's shortage of engineers and workmen n342
New Jersey highway engineers get new assignments n761
New Mexico road officials resign.....n628

Highway Construction

Access rights legislation required for freeway construction. J. M. Devers. 249
Air entraining admixtures included in Public Roads Administration specifications *656
Armor coated highway construction through the sand hills of Nebraska..*496
Asphalt mix attained with steam dispersion produces good surface over broken pavement. H. J. Ludden...*241
Asphalt underseal corrects pavement pumping through joints and cracks, Tex. *370
Blue Ridge Parkway work is resumed..*880
Bolivia—Santa Cruz-Cochabamba highway construction. J. L. Harrison...*429
Delaware salvages a 27-year old concrete pavement *41
Federal-air road work, as of July 31, 1946 (table) 265
Frost action in permafrost regions. A. Tchekotillo *724
Kentucky attains record road program despite unfavorable conditions.....*659
Kentucky relocates highway with the aid of earthmoving scrapers.....*384
Missouri State highway construction trends *648
Oregon's highway pavement is free from frost damage.....n356
Resurfacing and sealing Cincinnati streets *302
Shirley Memorial Highway extension moves 178,000 cu. yd. of earth monthly *780
Virginia expands use of asphalt to end pumping at joints in rigid pavements.*584
Highway design—Rhode Island finds distributed reinforcement in pavements increase life of highways. L. V. Spencer (table) 806

Highway Economics

Arkansas 1947 road work cost.....n619
California 10-year highway financing plan n772
Gas tax use to be voted on by Texas..n351
Cost of highway work continues high..n482
Federal-aid road work, as of July 31, 1946 (table) 265
Gas tax for N. C. highway work proposed n279
Gas tax use to be voted on by Texas.....n351
Kentucky truck fees must be spent on roads n695
1947 budgets figures in western states..n829
North Carolina road body opposes road fund diversion n556
North Dakota amendment increases gas tax revenue n706
Ohio—Is Lake Erie part of the road area? 57
Plans for 1947.....n609
Road fund diversion fought in 3 more states n828
Texas voters want road funds protected.n695
Washington State short of fund need.
Highway lighting—New standards set highway lighting. H. E. Mahan.

Highway Maintenance

Cincinnati—unit costs of highway maintenance (table) .....
Costs of maintenance rise reported Highway Research Board.....
Missouri Highway Dept. finds prevent maintenance extends life of equipment .....
Snow removal planned in Pennsylvan
Weed killer used in spray rig.....
Highway marking—Shop-built equipm aids in studying highway paints.....
Highway research—South Africa has mobile road testing laboratory.....
Highway Research Board—Committee Maintenance Costs makes report.....
Meeting .....
Highway Research Board & A.R.B —Highway equipment progress cussed .....
Highway safety—Federal road-saf committee organized .....
Safety on the highway.....

Highways

Access rights legislation required for freeway construction. J. M. Devers. 249
Access roads receive allotment.....
Access roads to timber lands needed to help housing.....n279
Africa—Great Britain plans highway across the continent (map).....
Alaska Highway—Canada to develop Now open to limited civilian use.....
Arizona roads seen unfit for travel.....
Balboa Freeway, Calif. allows for "sidewalk superintendents" .....
Baltimore expressway tentatively approved .....
Baltimore freeway link opposed.....
Bay Shore Highway, Calif. bids asked..
Bolivia—Santa Cruz-Cochabamba highway construction. J. L. Harrison..*429
Bolivia's highway plans. Fred Lavis..l 742
Boston—Charles River Boulevard proposed .....
Brewer, Maine—Bituminous concrete road (unit prices).....
Brookline, Mass. plans an express highway .....
California reports a proposed $2 billion ten-year highway plan.....
Connecticut survey shows need of better roads .....
Costs block road building in Maine, Arkansas and Washington.....
Dallas, Tex. pushes Central Boulevard project .....
Delaware road program proposed.....
European work is checked by U. S. roads chief .....
Fort Wayne, Ind. express highway planned .....
France road progress. M. Rumpler....l
Hawaii road building program.....
Houston-Port Arthur superhighway started .....
Hutchinson River Parkway toll suit dismissed by court.....
Indianapolis "belt line" to be completed .....
Jacksonville, Fla. inter-regional highway plan revised.....
Jacksonville, Fla. super-road.....
Kentucky will teach vets highway engineering .....
Maine gravel road between Norway and Waterford (unit prices).....
Mexican highway expenditures for 1946.
Mexico—Cristobal Colon Highway declared open .....
Mexico undertakes rehabilitation of Tehauntepec route. C. S. Hill.....*
Midwest road men discuss costs, plans.
Mississippi River parkway favored by Illinois governor .....
Mississippi River Scenic Highway Assn. pushes plan for road.....
"Nalyeds" or surface ice formation, in permafrost regions. A. Tchekotillo..*724
National road network by Public Roads Administration accepted by 39 states.
New England roads retarded by high costs .....
New forest areas reached by road program .....
New Orleans traffic plan.....
New York City—Brooklyn-Queens connecting highway (unit prices).....
New York State road rebuilt with steam-dispersed asphalt. H. J. Ludden .....*
New York State's "Thruway" work starts n69;
North Carolina bars oversized loads from road .....
North Carolina, Pennsylvania and Arkansas highway work blocked by engineer shortage .....
Ohio toll superhighway proposed.....
Oklahoma City road plan awaits approval .....
Pan American Highway—Chile making its link hard surfaced.....
Penn-Lincoln Parkway extension survey started .....
William Penn Highway to be improved.
Pennsylvania improves 1,145 mi. of roads .....

* Illustrated; a, abstracts; e, editorials; l, letter; n, news

Pennsylvania—Union wages enforced..n217
Philadelphia plans a $20 million road..n418
Pittsburgh community road improvements urged n490
Prado Dam, Calif. claims for road flooding n89
Public Roads Administration asks state highway departments to confine work to needed operations.....n399
Radio snow warnings for motorists...n619
Richmond, Va. express highway planned n690
Richmond, Va. through highway planned n151
St. Helens Highway, Washington, surfacing (unit prices)..... 606
St. Louis County, Mo. plans extensive parks and drives.....n70
San Francisco Bayshore freeway contract awarded n545
San Francisco Bay Shore Freeway (unit prices) 891
Holland—Credits for reconstruction.....n613
Hose—Grounded air hose protect drillers from punctured electric conduits..... 879

Housing

Adobe houses. M. P. Sheridan.....l 537
Alaska, Pacific, contracts for troop housing awarded n1
Aluminum houses for Puerto Rico...n*135
Aluminum prefabricated house...n*479 *837
American Legion committee's report scores housing program for veterans.n757
Army engineers get orders to start $41 million building program.....n703
Australia converts barges into houseboats n547
Barracks go to school to ease house shortage n*553
Barracks for Camp Cooke, Calif.....n*618
Boston plans large housing program...n842
British West Indies plans workers housing n72
Builders doubt housing plan figures.... n73
California housing experts report on housing n688
Canada's five-point program.....n267
Canada's housing needs remain critical n148, n752
Canada reports home building costs increased n478, n760
Canadian housing group starts 3,000 units in '46.....n485
Chicago—Model home city to be built near city n614
Chile to erect prefabricated houses....n203
Civilian Production Administration reports lagging production of key materials n614
CPA cuts non-residential building to spur housing n491
Contractor fined for paying higher than average wages n2
Cost of home construction $7,000 average n491
Enters a new phase.....e855
Entry of aircraft industry into housing field n615
FHA small-home planning bulletin revised n270
Great Britain
Approves twelve types of permanent housing n*546
Birmingham erects private houses... n72
Clay walls interlocked into steel framework n278
Dover builds prefabricated town....n*685
Housing built to date.....n402
Minerva Estates being built of reinforced concrete n*684
To have housing exhibition.....n203
Guaranteed market for 19,400 homes..n483
Housing goals need revision.....e570
Housing still unsolved. G. H. Herrold..l 537
India considers apartment construction n402
Los Angeles—Griffith Park Quonset hut project n*775
Lustron Homes, all-steel, porcelain finish prefabs n*849
Mass. seeks substitutes to speed vets' housing n218
Mexico provides houses for workers....n135
Must housing follow meat?.....e424
National Committee on housing urges multiple housing units.....n842
NHA extends building machine freeze..n562
National Housing Agency reports on housing goals n771
National Housing Expediter resigns...n771
National Inst. of Governmental Purchasing discusses housing.....n270
Nevada—Old barracks moved 102 miles because of materials scarcity.....*389
New housing horizon.....e291
New ideas for building advanced to hasten end of housing crisis.....*534
New Jersey starts veterans' housing plan n491
New order aids delivery of housing supplies n355
New York City
Abraham Lincoln housing contracts let n478
Elliott Houses floor construction. F. N. Severud *526
Jacob Riis project blocked.....n136
Reinforced concrete on rocker to be swung into position to form sidewall *753
1947 housing program needs new public works n415
Norway has housing program.....n203
Number and estimated construction cost of dwelling units started in 1,- industrial areas 405
Oregon grants cement priorities for vets housing n140
Pasadena, Calif. builder punished for housing order violation.....n478
Perspective . . . the housing picture.... 152
Philadelphia redevelopment law challenged in court.....n840
Plastics for prefabricated houses, Germany n*402
Precabricated construction code approved n155
Prefabricated Home Manufacturers & Dealers Assn. organized.....n614
Prefabricated houses barred in Knoxville, Tenn. n218
Premium payments for gypsum board and lath to spur housing.....n73
Priority change made to aid veterans housing n614
Puerto Rico housing project planned.. n5
To invest in housing projects.....n203
Put priorities where they count.....e494
Rental housing attracts millions in insurance and savings bank funds..... n07
Rental housing to be speeded.....n845
St. Petersburg, Fla. plans housing for Snell Isle n140
San Diego, Calif. army camp material makes homes for veterans.....n490
Shortage housing at home blocks occupation armies n694
South Bend, Ind. union-sponsored, to be built n288
Steel houses to be built.....n64
"Super" priority set for re-use housing.n140
Venezuela has workers housing program n72
Wartime building industry controls lifted n823
Washington State seeks building moratorium to help veterans' housing....n411
White Plains, N. Y. plans low-rent housing n852

Hydraulics

Charts for canal flow computations. Commons & Griffith.....*864
Grand River stream gaging station proposed n615
New type control for gaging stations. C. C. McDonald.....*256
Stanton diagram modification gives direct solution for pipe flows. H. J. Miles *732
Variable flow in level channels solved by simple chart. Commons & Griffith....*442

Hydro-electric Power

Alabama-Coosa River system hearings planned n340
Allatoona Dam and powerhouse, Ga. (unit prices) 126
Canada pushes Campbell River development n133
Clark Hill project considered in hearings n630
DeCew Falls plant removes sticky mud with drag equipment.....*587
Egypt—Ashwan Dam power installations bids requested n202
France—St. Etienne-Cantales Dam and spillway built over power house.....*182
Idaho Power to build 3 hydroelectric plants n490
Mexico City to install hydro plant..... n72
New Zealand hydro project on Waikato River n826
Pacific Gas & Electric plans new power plants n568
Peru plans major hydro dam..... n72
Puerto Rican floating power plant work rushed n5
Puerto Rico plans hydro in Luquillo Forest n202
Russia plans new hydro.....n135
Santee-Cooper project needs additional slope protection n694
Sault Ste. Marie hydro plant plans completed n11
Skagit River plant to be expanded....n776
Switzerland plans for power (map)....n472
TVA receives appropriation.....n145
Toketee Falls, Ore. development approved n285
Wilder, Vt. power plan approved by FPC order n757
Hydrology
Arizona's water runoff 50 percent below normal n623

I

India

Apartment construction considered.....n402
Construction of a new National War Academy planned n547
Delhi chlorine plant to be built.....n478
Housing program considered.....n27
Lower Sind Barrage irrigation project to start n547
Madras harbor to be expanded.....n685
Roadbuilding started n685
Seaports under consideration.....n*612
Tenements for industrial workers to be built n613
Inter-American Assn. of Sanitary Engineering Organization n*471
Inter-American Regional Conference of Sanitary Engineering in Rio de Janeiro. n4
International City Managers' Association Montreal, Que. meeting..... n7
International Organization for Standardization Organized n684
International Technical Congress—Plans made for meeting.....n269, n420

Irrigation

Arizona water project bill..... n6
Bridge Canyon tunnel, Colo. declared feasible n422
California Water Resources Board opposes government authorities for regional projects n133
Canada—Alberta irrigation project started n634
Colorado-Big Thompson
Contracts let n16
Project under construction n*284
Tunnel, hard-rock, sets driving record n*689
Columbia Basin project progress reported by Pacific Coast editor.....n221
Columbia Basin rock tunnel contract let n11
Deer Creek irrigation work cost n281
Deschutes Irrigation Project—flume crosses canyon on a rigid frame.....*448
Mexico—El Mirador irrigation tunnel construction *158
Miami Conservancy District clears debt after 33 years of operation.....n630
Missouri River Basin development advanced n133
Provo River Project—Deer Creek aqueduct approved n824
Reclamation construction awards in 1946 .....n341
Texas Panhandle irrigation reduces water table n412
U. S. Public Health Service to prepare new industrial water use standards..n847
Utah Water Users Assn. seeks development fund n617
Washington state irrigation project studied n850
Islands—Tern Island raised from the sea for an airfield.....n*760

J

Japan—Oil storage tanks construction underground. Comdr. C. J. Scheve & Lt. G. J. Fox.....n*206
Java—Batavia to be rebuilt on new site..n134
Joints—Concrete connectors for timber joints. Max Miller.....*364

L

Labor

Arizona fights closed-shop contracts..n702
California contractors penalized by WSB n422
Canada—Halifax, N. S. men receive raises n347
Cleveland carpenters strike broken by other building trades.....n288
A creed for bargaining.....e495
Electric contractors ok union pension..n487
Employment on construction work rises, but skilled men remain scarce.....n401
Housing workers deferred from military service n272
Houston building trades strike ended n272, n334
Labor leaders convicted of extortion on N. Y. C.-Delaware project.....n145
Labor productivity. M. C. Tuttle.....l 888
Materials and labor prices
62, 192, 326, 460, 672, 814
Metal Trades Dept. unions move on jurisdictional strikes n682
Minnesota has no work stoppage.....n75
New York City transit report recommends a collective bargaining plan..n353
Phoenix city workers ask shorter hours, more pay n610
Public workers and the right to strike. C. S. Rhyne..... 292
St. Louis carpenters win raise.....n848
Seattle city workers not to have collective bargaining n702
Skilled help for construction. Griffin & Crawford *426
Strikes in public service.....e358
Texas construction blocked as unions, contractors fail to agree.....n71
Texas and Oklahoma courts outlaw city employee strikes n759
Toronto threatened with jurisdictional strike n772
Travel expenses for construction labor must be approved by WAB.....n342
Union wages enforced on Pennsylvania highways n217

* Illustrated; a, abstracts; e, editorials; l, letter; n, news

Wage boost to Oregon building workers n295
Wage controls go back on construction industry n141
Wages freed of regulation by the President n627
Wage overpayments to be penalized n23
Wage raises in "no control" period may be law violations n215
Wagner Act clarification on rights of professional employees sought by ASCE n89
WAB begins publishing legal area wage rates n488

Lakes

Is 3,457 sq. mi. of Lake Erie part of Ohio's road area? 57
Erosion of Lake Ontario shores studied by U. S. and Canada 112
Lake Tahoe, Calif., partial drainage would stop Truckee floods n91
Ohio plans many artificial lakes n850
Latin America—Letter from Latin America. E. J. Cleary 477, *551, *564
Latrines of aluminum for Puerto Rico .. n*135
Lebanon—Airdrome to be built n473

Levees

Cairo, Ill. levee construction to start .. n624
Cutoffs in levees. F. E. Fahlquist 1188
Louisville Flood wall work to proceed .. n832
Omaha levee construction started n74
Lights and lighting—Fluorescent lighting developments increase lamp output, decrease costs. A. G. Elley *105

Lumber

Black market charged by government .. n1
Freight space shortage blocks lumber .. n351
Lumbermen see federal forest control .. n345
Overcutting endangers Minnesota's lumber industry 243
Production increased n340
Western pine production to be increased n617

M

Marine borers—Brielle, N. J. bridge collapse blamed on marine borers n266
Mathematical formulas—Circles of stress and strain compared. J. C. Rathbun *376
correction 538

Mexico

Bank for the development of housing n5
Building boom is slowing down n684
Building loan bank for "middle class" families n827
Cement plant to be encouraged n337
Cristobal Colon Highway declared open. n685
Financing railway equipment n753
Highway expenditures in fiscal year .. n403
Housing for workers provided by industries n135
Mexico City hotel planned n*203
Mexico City to install hydro plant n72
Overland ship transport discussed n336
Railroad network planned n547
Scarcity of cement n547
Shipyards to be constructed n473
Tehuatepec route rehabilitation undertaken. C. S. Hill *734
Miami Conservancy District
Clears debt after 33 years of operation .. n630
A great project pays off e637
Models—Mt. Morris Dam model n*212
Models—T. L. Crimmins and Henry Morrison receive awards n*852
Morrell, Admiral Ben (Our Engineer Admirals) *77
Mosquitoes—California practices mosquito abatement by flood control 166
Moving—Nevada—old barracks moved 102 miles *389
Municipal problems
Cincinnati lends money to federal government n632
Cities finance public works on pay-as-you-go basis 501
Munitions
Blockhouse for rocket testing constructed at N. M. n*476
Holston Ordnance Works construction speeded behind a curtain of war secrecy *96

N

National Highway Users Conference Transport Congress n419
National Institute of Governmental Purchasing Conference n270
National Professional Assn. of Engineers, Architects and Scientists formed n487
National Society of Professional Engineers Convention seeks clarification of labor laws affecting professionals n833
Netherlands—Ijmuiden lock restoration .. n72
New England Water Works Assn. meeting n405
Newfoundland—Reconstruction program being planned n613
New York Society of Professional Engineers Convention n683
New Zealand—Hydro-electric project on Waikato River n826
Noise
Miami Beach curbs construction noises. n848
Principles of noise reduction in offices and factories (Building Designers' Library). M. A. Smith *643

Norway

Deep-water pier construction, Trondheim Harbor n*826
Hol hydro-electric being pushed n547
Oslo housing program successful n203

O

Oil wells
Venezuela builds foundations for oil wells in Lake Maracaibo of hollow piles. E. J. Cleary *859, e854

P

Paints—Highway paints studied by means of shop equipment *602
Palestine—Haifa engineer describes municipal organization n473
Parking—See Street Traffic

Parks

Akron plans park at water supply reservoir n154
Indiana plans for parks n86
St. Louis County, Mo. plans extensive parks and drives n70
Paraguay—Sewer built of timber and floated into place *46

Pavements

Airports—Fairfield-Suisun, Calif. airbase runway of heavy-duty concrete with no expansion joints *504
Runways—tests of flexible pavement for airport runways, pt. 1, *36; pt. 2 ..... *113
Asphalt underseal corrects pavement pumping through joints and cracks, Tex. *370
Cincinnati protects its streets by extensive resurfacing and sealing *302
Rhode Island finds distributed reinforcement in pavements increase life of highways. L. V. Spencer (table). 806
Trenton, N. J. law requiring local paving mix plants upheld n152
Panama—Loan for highways approved .. n473
Peru—Highway construction firms needed to invest capital n5
Hydro-electric project surveyed n72

Philippine Is.

Appropriation for rehabilitation work passed by House n19
Firm combine gets $30 million job n275
Manila reconstruction. Herbert Leopold *172
Public Roads Administration establishes new division office to aid reconstruction n612

Piles and Pile Driving

Atlantic City boardwalk rebuilt with precast concrete piles and joists *799
Dynamic pile-bearing formula with static supplement. W. H. Rabe (tables) *88; correction in hammer energe formula see ENR Jan. 23, '47, 146.
Hollow piles as foundations for oil wells in Lake Maracaibo, Venezuela. E. J. Cleary *859
Pipe piles driven to support Lakeside Press, Chicago *722
Powell River, B. C. concrete wharf deck built on creosoted wood piles .. *185
Pulling long concrete piles with special equipment *500
Steel cylinders support piers and wharves. E. H. Harlow *33

Pipes and Pipelines

Boston oil pipeline approved n141
Cast-iron soil pipe production granted premium n200
Cast-iron soil pipe regulations to be changed n340
Concrete pipe jacked under a railroad .. *299
Fuel pipeline construction approved by FPC n89
Great Britain—English Channel fuel pipeline to be used for lead n5
Minnesota oil pipelines to be completed. n765
Natural gas pipeline, La.-St. Louis, approved n356
Natural gas pipeline to be financed by four Alabama cities n705
Natural gas pipeline Texas-Wisconsin to be built n74
Natural gas—Texas-California section contract awarded n557
Production of one ton of concrete requires 4.4 mn-hours ..... [illegible]
Radiant heated plant with different rangements, Kankakee, Ill. ..... [illegible]
Roanoke Rapids, N. C. water and s extensions (unit prices) ..... [illegible]
Saginaw-Midland, Mich. water cont awarded ..... [illegible]
Stanton diagram modification direct solution for pipe flows. H Miles ..... [illegible]

Planning

Appropriation for FWA to assist s planning bodies ..... [illegible]
City Planning Div. of ASCE plan c an cities' decentralization ..... [illegible]
Great Britain—cost of a "new town Great Britain plans second sate town for London ..... [illegible]
Indianapolis, Ind. redevelopment pla Kansas City develops master plan a guide ..... [illegible]
Manila, Philippine Is. reconstruc Herbert Leopold ..... [illegible]
New York City traffic solution plan New York State helps cities to h themselves. J. O. Heck ..... [illegible]
Ohio county zoning code proposed Pittsburgh appoints redevelopm board ..... [illegible]
Replanning European cities. W Carey ..... [illegible]
San Diego civic center planning fu approved ..... [illegible]
Several cities complete master plans for long range development ..... [illegible]
United Nations select New York city for skyscraper world capital cente (map) ..... [illegible]
Zoning amendment voided by N. Y State court ..... [illegible]
Plastics—German prefabricated houses t use plastics ..... [illegible]
War time plastics continue to be used Plumbing defects cause N. Y. typhoid out break ..... [illegible]
Plywood—Guides to improved framed walls for houses. A. D. Freas ..... [illegible]
Stainless steel panels bonded to ply wood ..... [illegible]
Portland Cement Assn. to expand its re search ..... [illegible]

Ports and Harbors

France—Dunkirk port officially re opened ..... [illegible]
Harbor rehabilitation work pushed by engineers ..... [illegible]
Hawaiian harbors to be repaired ..... [illegible]
India considers new seaports ..... [illegible]
India—Madras harbor to be expanded. Manila, Philippine Is. reconstruction Herbert Leopold ..... [illegible]
Mexico undertakes rehabilitation of Tehauntepec route. C. S. Hill ..... [illegible]
Puerto Rico—San Juan and Mayaguez ports to be improved ..... [illegible]
San Francisco Bay transformation plan is studied by War and Navy Departments ..... [illegible]
Tacoma and San Diego to have harbor improvements ..... [illegible]
Venezuela, Brazil and Australia to improve their ports ..... [illegible]
Wisconsin rivers and harbor work underway ..... [illegible]

Power and Power Plants

Boilers to be installed on top of Dallas building ..... [illegible]
Florida Power plant at Inglis ..... [illegible]
Gadsen, Ala. steam plant planned ..... [illegible]
Hunters Point, Calif. steam plant to be expanded ..... [illegible]
Illinois steam power plant planned ..... [illegible]
Jackson, Miss. to construct steam-electric station ..... [illegible]
Niagara Hudson Electric to add unit ..... [illegible]
Ohio Power constructs Tidd plant by the river. H. A. Kammer ..... [illegible]
Pennsylvania Electric's plant excavations on the Allegheny kept dry with wellpoints ..... [illegible]
Power rationing seen possible in Ontario ..... [illegible]
South Carolina Power starts steam electric plant at Charleston ..... [illegible]
South West water crisis met by Bureau of Reclamation ..... [illegible]
West Springfield, Mass. plant to be built ..... [illegible]
Power see also Hydro-Electric Power
Prefabricated Home Mfrs. & Dealers Assn.—Southern California builders organize ..... [illegible]
Prefabricated Home Manufacturers' Institute Meeting ..... [illegible]
Priorities—80 War Assets Administration construction materials under priority control to aid housing ..... [illegible]
Nails, hardware, wiring put under priority rule ..... [illegible]
Producers Council Convention ..... [illegible]

Public Works

Atlanta civic projects voted ..... [illegible]
Cities finance public works on pay-as-you-go basis ..... [illegible]
Cities reject bonds for improvements .. [illegible]
Cleveland considers construction program ..... n76, [illegible]

* Illustrated; a, abstracts; e, editorials; l, letter; n, news

ngress approved major engineering bills before closing session.....n204
onstruction bond issues voted.....n705
ouncil of Economic Advisors report that "heroic" public works plan unneeded n845
Dominican Republic pushes public works *382
Federal Works Agency reports planned local public works.....n349
Florida authorizes millions for state work n86
Hawaii planning public works.....n485
Honolulu plans new buildings.....n278
Hospital program favored by Congress.n154
Houston, Tex. bond approved by public construction n201
Local units plan $6 billion works.....n561
Los Angeles County bond vote withdrawn n75; n335
Minneapolis, Minn. plans building program n852
Minneapolis needs new schools.....n136
Municipal public works curtailed by higher costs reports International City Managers' Assn.....n840
New York State helps cities to help themselves. J. O. Heck.....*163
North Carolina plan board advises works postponement n697
Ohio cities delay work because of shortages n283
Pennsylvania unable to build schools now n278
Philadelphia can finance 4 years' public works n765
Philadelphia refuses to halt improvement program n770
Philippine Is. $30 million job awarded to firm combine.....n275
Plans should be free. F. E. Harley..l 323
Reconversion Director orders federal public works slowdown.....n147
St. Paul, Minn. to vote on bond issue..n569
Seattle to receive allotment for public works n91
Tulsa, Okla. construction blocked by material shortages n88
Westchester County, N. Y. seeks bids on public works.....n412

Puerto Rico

Activities for fiscal year.....n134
Floating power plant work rushed.... n5
Highway improvements suggested.....n685
Housing investments n203
Housing project planned.....n5
Hydro-electric project in Luquillo Forest n202
Planning Board recommends appropriation for public works.....n755
Public works appropriation.....n473
Rio Piedras-LaMunda highway planned.n613
San Juan and Mayaguez ports to be improved n202
Yaguez River bridge to be constructed.n755
Pumps—Calif. East Bay Municipal District installs check-valves to prevent water hammer. H. A. Knudson....*310
Grand Coulee pumps to be installed...n*213

R

Rail and water terminals—Toledo's consolidated terminal under way.....n634
Railway accidents—Time lost at railroad grade crossings 54
Railway power plants—Arizona and Florida use mobile power plants.....n*629

Railway Terminals

Akron's Erie R. R station contract let..n624
Springfield, Mo. to expand shops, yards and terminals n629
Toledo union station planned by N. Y. Central n611

Railways

Africa—Johannesburg-Cape Town railway to be re-routed.....n134
Alaskan railway, Fairbanks to Teller, surveyed 108
Chicago station—sewer pipe jacked under railroad *299
European rail transportation to be coordinated n403
France plans railway electrification...n202
Mexico discusses overland ship transport across the Isthmus.....n336
Mexico undertakes rehabilitation of Tehauntepec route. C. S. Hill.....*734
Netherlands railways 91 percent back in service n*72
Rails—T-rail, designed in America, used by the English.....n472
Rat fight continued by St. Louis.....n140
Rat-proofed buildings required at Durham, N. C.....n267
Reclamation see Irrigation.
Research—Johns-Manville Research Center features movable partitions.....*169

Reservoirs

Akron reservoir to have recreational park n154
Fontana Dam reservoir causes ground settlement. C. E. Blee.....l 456
Horsetooth Reservoir, Colo. contracts authorized n16
Kanopolis Reservoir started.....n6
New Orleans reservoir of precast sectional walls and roof to allow for uneven settlement *244
Russia—Orto-Tokoi Reservoir work resumed n5
San Carlos Reservoir suffers from drought n*221

Rivers

Alabama-Coosa River system hearings planned n340
Canada—Fraser River fishways designed for wide head variation.....*386
China—Yellow River being turned back to its prewar channel. O. J. Todd...*572
Colorado River development studies by five states n335
Columbia River discussed at A.S.C.E. convention n85
Mississippi and Missouri Rivers control problems reviewed by A.S.C.E. n567
Missouri River navigation work bears fruit with towboat's first trip.....n*705
Missouri Valley historic sites surveyed..n760
National river basin policy needed to give all regions equal opportunity. W. C. McNown.....55
Schuylkill River desilting plan.....n352
Willamette River, Ore. river improvement makes another necessary.....n624
Wisconsin rivers and harbor work underway n93
Yellow River control to be studied by U. S. engineer mission.....n694
Yellow River dikes being closed after an eight-year struggle.....n*268

Roofs and Roofing

Good roofs require more than mopping. E. A. Swenson (Building Designers' Library) *515
Switzerland—Zurich stadium roof supported by four columns.....*454
Tiffin, Ohio, plant roof of welded trusses aids conveyorized layout.....*360

Russia

Desert land planted with trees.....n755
Housing being rebuilt.....n754
Hydro-electric plant planned for site north of Kremenchung.....n135
Kief rebuilding city.....n547
Krivoi Rog iron mines to be restored..n403
Surface ice formations in permafrost regions. A. Tchekotillo.....*724
Orto-Tokoi Reservoir work resumed.... n5
Railway bridges to be restored.....n134
Reconstruction plans n203
Sewage plants and water supply plants projected n402
Water navigation routes being repaired.n473

S

Sanitation

Inter-American sanitary group formed at Caracas meeting.....n154, n*471
Municipal sanitation by atomic energy?.n477
National plumbing code now being developed n333
St. Louis creates agency to conduct rat fight n140
Sanitary engineers in the Army.....e224
The sanitary engineer looks forward. Abel Wolman 307
Sanitation engineers from eight American nations meet in Rio de Janeiro...n4
Streets cleaned by pressure flushing....*586
Seabees—Peacetime training for ex-seabees planned by Bureaus of Yards and Docks 162

Sewage Treatment

Australia—Brisbane plans expansion of sewerage n336
Boise, Idaho, sewage disposal plant engineering contract protested.....n633
California cities vote sewage system...n137
California sewage disposal system voted n76
Camden, N. J. plans $7 million sewage work n216
Cities report upon disposal plans.....n271
Delaware needs for water supply and sewerage n619
Denver sewage plant again attacked...n287
Florida cities planning sewage disposal.n485
Indiana cities plan sewage projects.... n23
Inventory of sewage disposal facilities—1945 (table) 654
Los Angeles sewage battle.....n632, n695
Los Angeles treats sewers to reduce beach pollution 161
Mahoning Valley cities need sewage treatment plants n847
Many water and sewer improvements planned n688
Miami sewage costs cut by modified septic tank rules.....59
Mission Township, Kan. sewer project to start n847
Nut Island sewage treatment plant, near Quincy, Mass. (unit prices).....606
Ohio communities plan sewerage development n756
Reno, Nev. district needs sewerage system n756
River pollution studied in many localities n485
Russia considers sewage and water supply plants n402
San Francisco receives authorization to hire consultants for sewage treatment plant at Islais Creek.....n87
Stockton, Calif. volunteers combat strike n477
Syracuse, N. Y. considers new sewage plant n288
Toronto fights a disposal battle.....*439
Variable flow in level channels solved by simple chart. Commons & Griffith...*442
Washington cities fight pollution with new sewage plant program.....52
Western cities plan sewage work.....433

Sewers

Akron sewer blast damages settled....n137
Chicago, Ill. intercepting sewer unit priced 749
Chicago sewer bid close to estimate....n351
Fort Worth sanitary program.....727
Hartford, Conn. tunneled sewer avoids traffic snarls *437
Jamaica Bay, N. Y. outfall sewer construction facilitated by wellpoints in submerged-sand fill *258
Los Angeles treats sewers to reduce beach pollution 161
Memphis to install many new sewers. n87
Paraguay sewer built of timber and floated into place *46
Rentals ruled valid only for maintenance use n756
Roanoke Rapids, N. C. sewer and water extensions unit priced.....749
St. Paul suburbs not to have further connections 792
San Francisco—overflow structure in trunk sewer diverts storm water to beach *45
Spokane gets state aid for new sewer project n271
Ships—Mexico discusses overland ship transport across the Isthmus.....n336

Shore Protection

Connecticut plans beach erosion prevention n840
Erosion of Lake Ontario studied by U. S. and Canada.....112
Federal aid for beaches.....e359
Kansas City floodwall and levee under construction n6
Los Angeles treats sewers to reduce beach pollution 161
New law authorizes federal assistance for beach, shore erosion protection..n340
Two states ask surveys of beach erosion damage n354
Sidewalk superintendents can see plans of Balboa Freeway, Calif. n*151
Sidewalk superintendents given seats, Philadelphia n490
Skating rinks—Hog hair silences skates, Colo. n846
Smoke abatement
Los Angeles starts anti-smog campaign n623
Pasadena residents fight Los Angeles smoke n492
Society for Promotion of Engineering Education—St. Louis convention.....n8

Soil Mechanics

Dynamic pile-bearing formula with static supplement. W. H. Rabe (tables) *868
correction in hammer size formula—see E. N. R. Jan. 23, '47, 146.
Field bearing tests made with water tank on trailer.....*390
"Nalyeds" or surface ice formation, in permafrost regions. A. Tchekotillo..*724
Sampling
Army Engineers develop cone penetrometer *809
Sampler for hard-to-hold soils.....*366
Southeastern Assn. of State Highway Officials Convention n691
Stadiums
Colombia—Baseball stadium for Caribbean Olympic games.....n*686
Switzerland—Zurich stadium roof supported by four columns.....*454
Standardization — Modular coordination found impracticable in Britain.....240

Steel

Adjustable all-steel form for concrete steps *809
No over-all allocation of steel is planned n86
Priorities held to housing needs.....n347
Scarcity of steel for nine-months is forecast n421
Specification of light-gage steel offers rational design formulas.....740
Steel building code changes analyzed. T. R. Higgins.....*529
Steps—Adjustable all-steel form for concrete steps *809

Street Traffic

Boston plans to untangle market area traffic n764

* Illustrated: a, abstracts; e, editorials; l, letter; n, news

Boston taxpayer offered traffic improvements free n851
Freeways do not solve congestion n753
Illinois cities consider traffic-easing plans n846
Memphis, Tenn. official believes underground parking would pay for itself .. *665
New Orleans traffic plan n*691
New York City and Chicago report traffic increases 298
New York City—Plan traffic solution ... n690
Parking
Atomatic parking device n*267
Baltimore studies new ordinance n214
California to have more subway garages n91
Georgetown, Ky. gets court sanction for condemning property for parking 642
Meters in parking lots reduce operating costs 301
Miami Beach meters reduce operating costs n25
Opportunity underground e358
Philadelphia and New York plan subway parking n140
Pittsburgh studies parking scheme ... n828
Sacramento makes tests for underground garage n767
St. Louis goes into parking business .. n75
San Francisco seeks new subway parking aids n851
San Francisco underground garage bid n286
Toronto to try "no parking" n619
Two West Virginia cities will operate garages 782
White Plains, N. Y. tries off-street parking meters 655
Plans for traffic aids at various points .. n404
Seattle traffic to be eased by tunnel or depressed roadway n404
Spokane, Seattle and Tacoma urge city off-street parking n478
Streets
Cleaning streets by pressure flushing .. *586
Toronto to remove snow by radiant heat n624

Subways

Chicago
Dearborn Street subway (unit prices) 607
Receives more bids n339
Chile—Santiago considers subway system n336
New York City—IRT platform extensions (unit prices) 747
Toronto subway delayed by finances ... n153
Venezuela—Caracas studies underground transportation n337

Surplus Property

AED head scores surplus disposal as hampered by red tape n*417
Associated Equipment Distributors criticize government surplus property disposal plan 32
Associated Equipment Distributors to report on surplus property n852
Fuller Co. will handle surplus disposal in Utah n71
Nails released for housing n140
Salvage of surplus military building materials n270

Surveys and Surveying

Aerial surveys ordered for Western dam projects n135
Blimp used by engineers for sewer system survey n567
Geological Survey topographic maps now available 233
Sighting rod with hat. C. H. Lovejoy .. 322
Stadia transit is British. R. E. Doyle .. l 888
U. S. Geological Survey to receive appropriation n23
Vertical curves by slide rule. R. T. Ewen ..... l 810
Vertical curve corrections simplified by use of slide rule. Samuel Lechner .. 187

Sweden

Civil engineer students tour U. S. n223
Fund for housing loans n613
Underground factories practicable for peacetime work n*754
Switzerland—Hydro power to be exploited (map) n472

T

Tanks and Standpipes

Conical elevated tank design with tubular legs *309
Japanese underground oil storage tanks. Comdr. C. J. Scheve & Lt. G. J. Fox n*206
Self-supporting water vat *58
Tools from steel tires 733
Traffic—see Highways and Street Traffic.
Trailers—Honolulu, Hawaii, trailers subject to building codes n73

Training

Apprentice training reaches all-time peak n610
Apprenticeship in construction industry increases n91
Construction trainees reach all-time high n702
Kentucky will teach vets highway engineering n618
Peacetime training for ex-seabees planned by Bureau of Yards and Docks 162
Training for management. Norman De Wind ..... l 537
Transportation
Auto clubs plan work for better transportation n853
New York City transit report recommends a collective bargaining plan .. n353
Trusses
Test-welded 80 ft. trusses with 144 strain gage n*15
Welded H-trusses aid development of conveyorized layout, General Electric plant, Tiffin, Ohio *360

Tunnels

Bridge Canyon tunnel, Colo.—Project declared feasible n422
Birmingham, Ala. road tunnel planned .. n151
Colorado—Big Thompson project—Hard-rock tunnel sets driving record n689
Columbia Basin—Irrigation tunnel contract let n11
Delaware River vehicular tunnel planned n129
Great Britain
Railway tunnel under Tyne River suggested n134
To continue Thames River tunnel n337
Hartford, Conn. tunneled sewer avoids traffic snarls *437
Hawaii tunnel contractors forfeit bond .. n557
Hawaii water supply tunnel contract let n340
Houston tunnels—Legal complications delay tunnels n87
Mexico—El Mirador irrigation tunnel construction *158
Seattle traffic to be eased by tunnel or depressed roadway n404
Tunnel repairs. E. E. Seelye ..... l 258
Turbine-generator foundation design. *316. H. L. Sigman ..... l 808
Turkey—Ten-year plan for railways n337
Turner, J. Archer, dies. Turner Co. chairman n*630
Typhoid fever
Typhoid vanishing in U. S. cities. M. N. Baker (Chart & table) 312
New York typhoid outbreak blamed on bad plumbing n288

U

Ukraine—New highways planned n135
Unit prices ... 126, 261, 394, 541, 606, 747, 891
United Nations select N.Y.C. for world capital center (map) n825

U. S. Army Engineers

Appropriation for fiscal year n79
Caribbean district is established n70
Caribbean District revoked in favor of Antilles and Panama Districts n149
Engineers and the military e571
Expansion of priority aid refused n90
Middle Atlantic division office to merge with North Atlantic division office n406
New division engineers named n617
Some regional offices shifted n357
U. S. Bureau of Reclamation—Contracts awarded for $22 million n689
U. S. Engineer Districts—War Veterans one-fourth of personnel n75
U. S. Navy—Civil Engineer Corps officers—corrections 124

V

Venezuela

Avenue Boliver to be modernized, Caracas n403
Brewery planned n337
Caracas water contract cancellation explained n483, n557
Caracas studies underground transportation n337
Maracaibo planning new water system .. n547
Port construction work n403
Reclamation engineer to help as consultant 558
Subway not to be constructed n473
Workers housing program n72
Vents—Design of explosion pressure vents. H. R. Brown (Building Designers' Library) *445
Veteran's plea ..... l 742

W

Walls

Cracked walls avoided. T. H. McKaig .*523
Guide to improved framed walls for houses. A. D. Freas *519
Johns-Manville Research Center features movable partitions ..... n*
Precast sectional walls and roof for uneven reservoir settlement, Orleans ..... n*
Reinforced concrete on rocker is swung into position to form sides ..... n*
Shooting concrete into walls cuts labor use and labor costs ..... n*
Warehouses—Hungry Horse Camp, warehouse (unit prices) ..... n*

Wastes, Industrial

American Public Health Assn. reports status of stream pollution control in U. S. ..... n*
California ground water pollution prohibits to industrial waste discharges ..... n*
German water and waste treatment practices described in new reports ..... n*
Los Angeles County law controls waste disposal beyond city lines ..... n*
Manufacturer pays Ohio for water killed fish ..... n*
Statewide plan needed on waste disposal ..... n*

Water Mains

Kansas City plans large water main ..... n*
Los Angeles unable to install water mains due to pipe shortage ..... n*
Los Angeles water main relined with cement mortar mechanically applied. G. W. Jones ..... n*

Water Pollution

American Public Health Assn. reports status of stream pollution control in U. S. ..... n*
Anti-pollution drive grows ..... n*
California ground water pollution points to industrial waste discharges ..... n*
Cooperative pollution control. R. C. Wheeler ..... l*
Lake Michigan states to ease pollution ..... n*
New York State begins study of anti-pollution laws ..... n*
Pennsylvania, Virginia push pollution control ..... n*
Potomac Commission outlines work ..... n*
River pollution studied in many localities ..... n*
States advance on stream clearing ..... n*
Toronto fights a sewage disposal battle ..... n*
Washington cities fight pollution with new sewage plant program ..... n*

Water Resources

California Water Resources Board opposes government authorities for regional projects ..... n*
National river basin policy needed to give all regions equal opportunity. W. C. McNown ..... n*
Utah Water Users Assn. seeks development fund ..... n*

Water Rights

California and Nevada withdraw from interstate Colorado River basin group ..... n*
Colorado basin states will continue cooperative river development studies ..... n*
Mexican water treaty work to be started ..... n*

Water Supply

Arizona water shortage ..... n*
Australian water supply program proposed ..... n*
Baltimore's salty ground water blamed on faulty well structures ..... n*
Central Arizona Project Assn. organized to bring Colorado River water into area ..... n*
Chattanooga, Tenn. plans water service expansion ..... n*
Cleveland, Ohio, plans water intake for northern section ..... n*
Colorado River water to be brought to Arizona by Bridge Canyon tunnel ..... n*
Delaware needs for water supply and sewerage ..... n*
Delaware River water project for Philadelphia and New Jersey ..... n*
Fort Worth sanitary program ..... n*
French water company utilities variety of treatment methods. M. N. Baker .*
German water and waste treatment practices described in new reports .. n*
Hawaii water supply tunnel contract let ..... n*
Hetch Hetchy water to be sold by San Francisco ..... n*
Holston Ordnance Works, Kingsport, Tenn. water supply ..... n*
Many water and sewer improvements planned ..... n*
New Mexico water shortage ..... n*
Olympia, Wash. seeks bids on water project ..... n*
Philadelphia considers program to improve taste and odor of water ..... n*
Phoenix, Ariz. to vote on water bonds .. n*
Russia considers water supply and sewage plants ..... n*
Saginaw-Midland, Mich. water contract awarded ..... n*
St. Louis weighs own power for water system ..... n*
St. Paul suburbs not to have further connections ..... n*

* Illustrated; a, abstracts; e, editorials; l, letter; n, news

...n Diego aqueduct financing studied..n485
...n Diego, Calif. County joins Metropolitan Water District.....n705
...n Francisco's water supply.....n285
...attle's lawns are green.....n10
...outh West water crisis met by Bureau of Reclamation n6
Texas cities can annex nearby water districts n487
Texas Panhandle irrigation reduces water table 412
U. S. Public Health Service to prepare new industrial water use standards..n847
Valparaiso, Chile, water shortage hastens plans for new supply system. A. T. Cook *731
Venezuela cancels water contract.....n483
Yonkers, N. Y. water supply endangered n410

Water Treatment

Australia—Brisbane plans expansion of water supply n336
Baltimore's Montebello filtration plant uses break-point chlorination to remove manganese. Edwards & McCall..*167
Dallas purification plant improvements (unit prices) 892
Dallas, Tex. purification plant bids called for n417
Diatomite filters offer advantages in industrial applications 719
French water company utilities variety of treatment methods. M. N. Baker.*380
Holston Ordnance Works, Kingsport, Tenn. water supply.....*100

Water Works

Albuquerque to expand water department n87
Annual waterworks reports could make good publicity 183
Atlanta, Ga. plans waterworks expansion n705
Cities push water expansion projects..n267
Cleveland, Ohio, plans water intake for northern section n350
Philadelphia waterworks basin cleaned by dredge without interrupting service *314

Welding

Fresno, Calif. plant designed for heavy loads with welded frame. Mark Falk..*640
Hartford hospital building frame welded. Poole & Booth.....*577
New welding code for building work..n136
Temperature effects being studied on large welded girders. La Motte Grover *502
Tests on welded girders. La Motte Grover .....l 742
Test-welded 80-ft. trusses with 144 strain n*15

Wellpoints

Draining coarse gravel with wellpoints, power plant on Allegheny River.....*638
Hammond, Ind. wellpoints used to compact sand fill for Standard Oil building. H. E. Berger.....*44
Jamaica Bay, N. Y. outfall sewer construction facilitated by wellpoints in pumped-sand fill *238
Wells—Baltimore's salty ground water blamed on faulty well structures 313

Wharves and Docks

Appropriation bill for Yards and Docks n19
Appropriation for construction received by Bureau of Yards and Docks.....n7
Atlantic City boardwalk rebuilt with precast concrete piles and joists.....*793
Chicago—University of Illinois to lease pier as branch.....n11
New Jersey—Edgewater rail-to-ship transfer pier n*549
Norway — Trondheim Harbor — deepwater pier construction.....n*826
Philadelphia pier failure due to high tides n266
Piers and wharves on steel cylinders. E. H. Harlow *33
Powell, R. C. concrete wharf deck built on creosoted wood piles.....*185
Wind power studies. F. H. Mason.....l 323
Wind turbines seen cheap power source n*150
Wind tunnels—Moffett Field, Calif. wind tunnel n*153
Supersonic wind tunnels built by Germans to be rebuilt by the Navy....n*550
Wire rope—Reeving a new wire rope....*603
X-rays—New betatron x-rays 20-in. thick steel n635

AUTHOR INDEX

Allen, G. H. Modified Bailey bridge trusses provide temporary river crossing *368

Baker, M. N. Typhoid vanishing in U. S. Cities *312
Variety of treatment methods utilized by French water company.....*380
Berger, H. E. Wellpoints used to compact sand fill *44
Blee, C. E. Fontana reservoir causes ground settlement .....l 456
Bonzagni, Frank V. & John Reich. Avoiding trouble on government bidding.. 373
Booth, L. F. & A. E. Poole. Welded frame for a 16-story building.....*577
Bragdon, Brig. Gen. J. S. Building an airbase in the Azores.....*250
Brown, Hylon R. Design of explosion pressure vents *445
Carey, Walter C. Replanning European cities .....l 188
Cleary, E. J. Letter from Latin America.....477; *551; *564
Prefabricated caisson foundations for submarine oil wells.....*859
Commons, G. G. & L. B. Griffith. Charts for canal flow computations.....*664
Variable flow in level channels solved by simple chart.....*442
Cook, A. T. Valparaiso, Chile, water shortage hastens plans for new supply system *731
Crawford, H. M. & Carroll Griffin. Skilled help for construction.....*426

De Wind, Norman—Training for management .....l 537
Devers, J. M. Access rights legislation required for freeway construction.... 249
Dodge, Wendell Phillips. Cuts in federal work .....l 456
Doyle, R. E. Stadia transit is British..l 888

Edwards, S. E. & G. B. McCall. Break-point chlorination increases manganese removal in sand filters.....*167
Elley, Alfred G. Fluorescent lighting developments increase lamp output, decrease costs *105
Ewen, Robert T. Vertical curves by slide rule .....l 810

Fahlquist, Frank E. Cutoffs in levees...l 188
Falk, Mark. Welded frame building designed for heavy loads.....*640
Fenner, Ward W. Design of industrial laboratories *510
Fox, Lt. G. J. & Comdr. C. J. Scheve. Construction of Japanese underground oil storage tanks.....n*206
Freas, Alan D. Guides to improved framed walls for houses.....*519

Geddes, Alfred H. A use for atomic bombs .....l 257
Gibson, J. B. Unusual erection problems encountered at Brazil's big steel plant *120
Gilson, W. J. Joint action in Canada....l 124
Girard, John. Phoenix plans a new airport *646
Goggin, John P. Favors joining the NSPE .....l 808
Goodall, George E. Horizontal joint put in arch dam in effort to prevent cracking *884
Gooding, W. J., Jr. Cutoff walls and riprap reduce culvert maintenance..... *58
Green, J. W. Railroad bridge redecked for vehicles *53
Griffin, Carroll & H. M. Crawford. Skilled help for construction.....*426
Griffith, L. B. & G. G. Commons. Charts for canal flow computations.....*664
Variable flow of level channels solved by simple chart.....*442
Grover, La Motte. Temperature effects being studied on large welded girders *502
Tests on welded girder.....l 742

Hale, C. S. Improved trimming and paving equipment used on the Coachella Canal *595
Harley, F. E. Plans should be free.....l 323
Harlow, Eugene H. Piers and wharves on steel cylinders.....*33
Harrison, J. L. Highway to transform Bolivia's economy *429
Heck, Joseph O. Helping cities to help themselves *163
Herrold, George H. Housing still unsolved .....l 537
Higgins, T. R. Laterally unsupported beams .....l 456
Steel building code changes analyzed..*529
Hill, C. S. The birth of mechanized construction *786
Tehauntepec route rehabilitation undertaken by Mexico.....*734
Hirschthal, M. Flat slabs and slab bands .....l 888
Horne, Robert C. Famous military bridges .....l *391

Izzard, C. F. On culvert design research.l 392

Johnson, C. A. & E. E. Seelye. Repairing an old Phoenix-Section bridge to carry modern loads safely.....*796
Jones, Gerald W. Mechanically applied cement mortar used to reline 31-in. water main *506

Kammer, H. A. Modern steam electric power station built on riverside site..*591
Knudson, H. A. Check-valves end water-hammer risk *310
Krettecos, Christopher. No shortage of engineers .....l 392

Lander, M. H. More bases.....l 257
Lavis, Fred. Bolivia's highway plans...l 742
Lechner, Samuel. Vertical curve corrections simplified by use of slide rule.. 187
Leopold, Herbert. Rebuilding Manila...*172
Long, L. D. Classifying ready-mix concrete plants *790
Lovejoy, Carl H. Sighting rod with hat.. 322
Ludden, H. J. Road rebuilt with steam-dispersed asphalt *241

Machado da Costa, Oscar. New arches strengthen old trusses.....*738
Mahan, H. E. New goals set for highway lighting *580
Mason, Frank H. Early wind-power studies .....l 323
Matthes, Gerard H. Book review..... 457
Mavis, F. T. Reducing unknowns in small culvert design *51
McCall, G. B. & S. E. Edwards. Break-point chlorination increases manganese removal in sand filters.....*167
McDonald, Charles C. New type control for gaging stations.....*256
McKaig, Thomas H. Practical methods to avoid cracked walls.....*523
McKeon, Ed. F. One-story factory design .....l *258
McNown, W. C. National river basin policy needed to give all regions equal opportunity 55
Mensch, L. J. Russian "innovations".....l 188
Middlebrooks, T. A. Review of book..... 324
Miles, Henry J. Stanton diagram modification gives direct solution for pipe flows *732
Miller, Max. Concrete connectors for timber joints found successful under test *364
Morgan, Chas. P. Building inspection by affidavit .....l 808

Parker, B. L. Chart determines economic depth of plate girders.....*186
Parker, Charles F. Correction of item.. 392
Poole, A. E. & L. F. Booth. Welded frame for a 16-story building.....*577

Rabe, W. H. Dynamic pile-bearing formula with static supplement.....*868
Rathbun, J. Charles. Circles of stress and strain compared *376
Reich, John & F. V. Zonzagni. Avoiding trouble on government bidding..... 373
Rhyne, Charles S. Public workers and the right to strike..... 292
Rumpler, M. French road progress.....l 323

* Illustrated; a, abstracts; e, editorials; l, letter; n, news